

Deploying Windows 7 With Third Party Tools

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What do you mean by 3rd Party tools?

Tools Other than the Standard tools offered by Microsoft :

1. Microsoft Windows Deployment Services (built into Server 2008). Network boot off WDS and deploy a Windows 7 Image.
2. Microsoft Group policy (Built into Active Directory. You can push applications rolled into MSI packages right from Group policy). This somewhat automates software deployment.
3. Pay to use: Microsoft Systems Management Services (Application deployment automation, ZTP=Zero Touch Provisioning etc..)
4. Imagex: The good ole command line imaging tool from Microsoft: <http://tiny.remco1.org/ajqnp>

3rd Party tools covered



- Fog: Free Open Source Ghost (image and application deployment, computer inventory, software deployment). <http://www.fogproject.org/>
- Linbox: Pay to play (image and application deployment, computer and software inventory, remote support + much more). Some OSX support. <http://tiny.remco1.org/fqyvp>
- Kace: Pay to play. Major player on the computer management scene. Owned by Dell. Full OSX imaging and software support (image and application deployment, Scripted Install, computer and software inventory, remote support, Helpdesk ticket system) <http://www.kace.com/>





3rd Party tools covered

- The FOG solution will require a 2nd free package for software inventory. I recommend OCS inventory
Screenshots: <http://tinyurl.com/yeydfvp>
Home Page: <http://www.ocsinventory-ng.org>
- OCS Inventory has a client that runs on any OS imaginable.
- OCS Inventory is amazing. You can also push applications from OCS Inventory BUT I believe you should utilize FOG's snap-in feature at least for initial computer deployment. FOG will deploy software immediately and correctly after its deployed the image.
- Use OCS Inventory later for one-off or large group software deployments
- OCS Inventory is MUCH better than Linbox's built in software inventory.

3rd Party tools covered

SPICEWORKS™

IT'S EVERYTHING IT Almost

- How about Spiceworks?
 - Ok, but it doesn't deploy software. We are looking for a complete deployment system. It does have other nice features though.
 - Check it out for yourself but I seriously recommend OCS Inventory instead for its software management side: <http://www.spiceworks.com/>



Why are you not covering...

Symantec Ghost, Clonezilla, DD (command line disk imaging for Unix/Linux/BSD)?

Answer

- Computer deployment is much more than just deploying images. If the solution does not include inventory features, application deployment as well as image deployment I chose not to cover it. Deployments need to be tracked and maintained.
- Also, if its a well known standard like Symantec Ghost, I don't see a reason in covering solutions that most already use. I want to go over new material that brings with it a suite of integral features.



???

You decide.



Why Image Computers

1. Consistency

- Not just for consistent correctness but also for consistent mistakes. If you pushed an image out to X machines and made a mistake you know the same mistake has been made in the same way and is on every computer. The solution is the same to fix all computers.

2. Confusion Avoidance (along the same lines as the above definition).



Why Image Computers

3. Speed

- Its a lot faster than doing it by hand

4. Automation

- Exceptional deployment solutions allow bare metal to a finished system simply from hitting F12 for network PXE boot (by linking inventory items by MAC address to images)



Why Image Computers

- In today's economy efficiency is a must. Huge support staff is unaffordable. Automation is key.

5. Maintenance + tracking after deployment

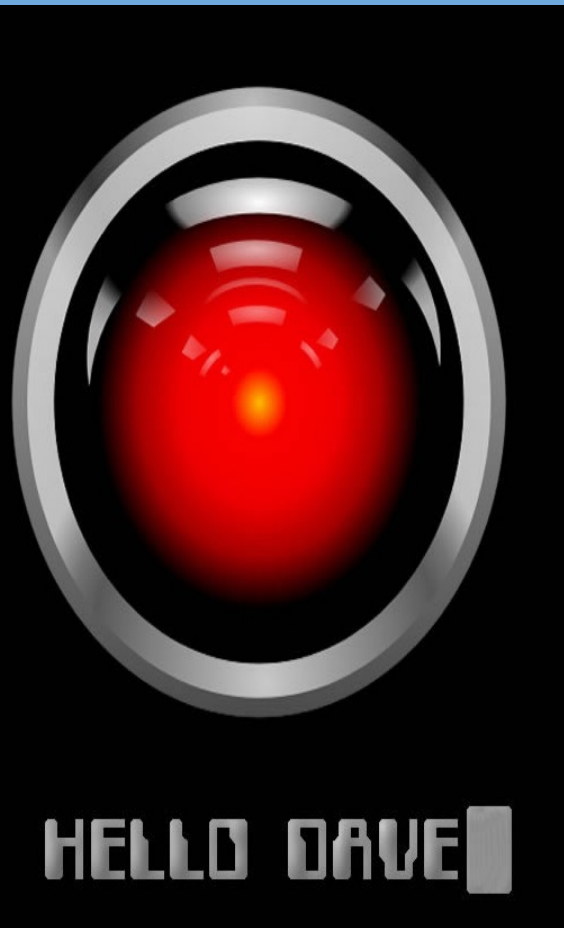
- Your imaging solution should be able to keep inventories of hardware and update software. There shouldn't be any guessing about what's out there.
- Your imaging solution should be able to push out software dynamically. No more running around installing programs by hand.



Why Image Computers

- 6. Security updates/Version updates for Software (more of an argument for a complete software management package)
 - Along the same lines as the previous point on Maintenance and tracking. We all know how many updates come out for Firefox and Flash etc..

Windows Imaging has been Streamlined



- Microsoft has made Windows 7 imaging a breeze by re-doing the HAL (hardware abstraction layer). You now **only need one generalized "sysprep'ed" Windows 7 image** for any hardware platform because in Windows 7 there is only one HAL.

(Source: Microsoft Technet: <http://tiny.remco1.org/etlic>)

- Windows XP had 6 HALS (of which only 3 were used on today's technology *but wait... usually only 2 of those were used*)

(Source: Symantec <http://tiny.remco1.org/pipdx>)

Feature Comparison

	Cost	Inventory	Interface	Boot Options	Raw Copy	Smart Copy	Backups	Multicast Imaging	Pre-Install Tasks	Post-Install Tasks	Application Deployment	Scripted Install	De Dupe	Remote Control
Linbox	\$\$		Web GUI, Webmin	PXE, CD						Requires Scripting	Requires Scripting		Backups Only	After Imaging, Needs Config
FOG	Free		Web GUI	PXE						Requires Client In Image	Requires Client In Image			
KACE KBOX2000	\$\$\$\$		Web GUI	PXE, USB, CD										Native During Imaging



VS



VS



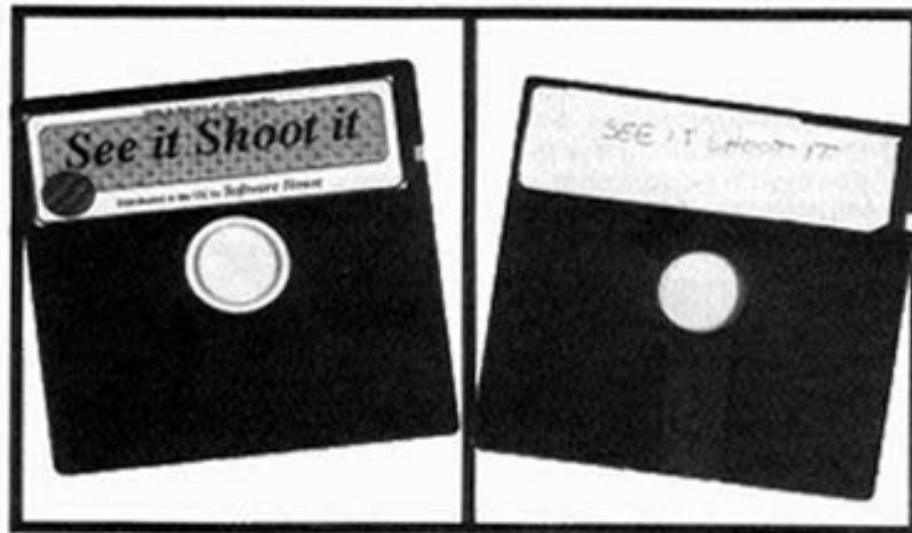
Imaging Essentials

- Successfully imaging a machine using 3rd party tools includes successfully licensing and activating that machine in an automated fashion.
- Windows 7/Vista keys and activation methods have changed for the Enterprise.
- This was inevitable with the rampant piracy of Windows XP.



Piracy Essentials

WARNING



**THIS DISK
COSTS
£14.99**

**THIS DISK
COULD COST
£2,000**

It's against the law to pirate software. You can be fined £2,000 or go to prison for six months.

THIS CAMPAIGN IS ORGANISED BY
ELSPA
EUROPEAN LEISURE SOFTWARE
PUBLISHERS ASSOCIATION

*Any information on piracy
should be passed to
The Federation Against Software Theft.
Telephone 01-240 6756*



Imaging Essentials

The Microsoft logo, featuring the word "Micro\$oft" in a bold, sans-serif font, with a registered trademark symbol (®) to the upper right of the word. The logo is set against a light, textured background.

Volume Licensing

- The "good old days" of Windows 2000 and XP are over
- With Vista and 7+ you have 2 options
- MAK (multiple activation key) or KMS (Key management server)
- With a MAK you can only activate the key for the # of activations you purchase. You manage your MAK's through a microsoft licensing portal: <https://www.microsoft.com/licensing/servicecenter/>
- You can also manage your MAK or KMS keys with Volume Activation Tool: <http://tinyurl.com/2vrlvho>
- The VAT will do more too. Download and read on it via the URL above.
- Link to a pdf and movie about how volume licensing works: <http://tinyurl.com/mt4m4p>

Imaging Essentials

Using the KMS (Key Management Service)

- Download the KMS here: <http://tinyurl.com/3l32o32>
- Install it on Windows 7, or Windows Server 200X (2003 with a special update).
- The KMS can be installed on any machine running a supported OS. Its light weight. The server can be running other services. It can be a domain controller.
- All windows Vista+ have the KMS client
- To tell windows you want to use a KMS server you use a special KMS key when windows prompts for the activation key.
- There is a special key for each Microsoft OS called KMS Client Activation Keys. They can be found here: <http://tinyurl.com/297bxeb>

Imaging Essentials

Using the KMS (continued)

- The KMS client key does not activate windows, it just tells windows you want to enable the KMS client and activate it off a KMS server.
- KMS discover starts...
 - 3 registry items are checked for finding a KMS server
 - Then the cache is checked for the last server used.
 - Finally if all methods fail DNS resource records are used. **It will attempt to find a KMS DNS record in your primary domain suffix** (The KMS server will automatically attempt to register itself to your AD DNS server)
 - If you dont use AD you can create the DNS records manually
 - You can also statically set the KMS server

Imaging Essentials

Using the KMS (continued)

- To Statically set the KMS Server
- Method #1: From c:/windows/system32
 - Execute: `cscript slmgr.vbs /skms yourserver.domain.com`
 - All KMS client reg keys are outlined here: <http://tinyurl.com/3rb5muo>

Imaging Essentials

Using the KMS (Continued)

- Method #2 can statically set DNS records and let the KMS clients autodiscover (recommended).
- For Windows Server...
 1. Open the DNS MMC
 2. Expand the DNS Zone
 3. Right click on the _tcp folder and select Other New Records...
 4. Select Service Location (SRV) as the new record type
 5. Fill in the following information for the new records
 - Service: **_VLMCS** (This is not in the drop down list and must be typed)
 - Protocol: **_tcp**
 - Port: **1688**
 - Host offering the service: **mskms.psu.edu**

Imaging Essentials

Using the KMS (Continued)

- Method #2 (continued)
 - Statically set your primary DNS suffix on the client. Do not leave it up to DHCP as if your laptop is taken to a different network and DHCP assigns a different suffix your machine may try to activate to someone else's KMS server.

Imaging Essentials

Using the KMS (continued)

- Method #3 Let it all happen automatically (pretty much requires Active Directory)
 - KMS will auto-register to DNS in an AD environment
 - The primary domain suffix is set automatically on the clients in an AD environment
 - If both those items are satisfied then it just works. Clients will automatically find the KMS server and activate if the clients are installed with the KMS key.

Imaging Essentials

Using the KMS (continued)

- You need at least 25 windows 7/Vista machines to use KMS
- Microsoft enforces this
- Your Windows 7 machines **WILL NOT ACTIVATE** until at least 25 machines have requested activation from your KMS server.
- Your computers can remain activated for 180 days. After 180 days (and a grace period) the machine will de-activate if it does not connect to a KMS server and successfully re-activate.
- Your machine will constantly try to reactivate every 7days (default) but this can be stretched to a maximum of 30days.
- ALL of the KMS client settings can be controlled centrally on the KMS server/host.
- Complete info here: <http://tinyurl.com/3v2r6d8>

Imaging Essentials

- When your done punishing yourself with KMS you can easily switch to a MAK (multiple access key) like this (windows 7/server 08 only)

```
slmgr.vbs /ipk <MultipleActivationKey>
```

then force re-activation

```
slmgr.vbs /ato
```



Imaging Essentials

Using a MAK to activate Computers

- Install this patch prior to the next step: <http://support.microsoft.com/kb/971033>
 - Run it with these options: /quiet /norestart
- Next create a new batch script and copy the following information, substituting the "x"s for your MAK.

```
cscript C:\Windows\System32\slmgr.vbs /IPK xxxxx-xxxxx-  
xxxxx-xxxxx-xxxxx
```

- cscript C:\Windows\System32\slmgr.vbs /ato
- ^^^^The line above forces Windows to attempt activation.
- The above will also work for OEM and individual COA keys but you will need to create .bat file for each computer.

Imaging Essentials

Now that we know how to automate Windows 7 activation we can move on.



MOVE ON

Know when to quit.



Imaging Essentials

- Don't put any software on your source image. Just Windows 7 with updates. Software gets stale. Push software out as a post installation task through FOG, OCS, or the Kbox
- Sysprep!! It's included with Win 7. C:
`/windows/system32/sysprep/sysprep`
- Now, for Windows 7 (and XP), Microsoft ONLY supports sysprep for buttoning up Windows images. Microsoft no longer supports 3rd party tools. No sidgen, ghostwalker, newsid etc.
- You MUST sysprep all Windows images prior to deployment (reset the image SID, activation, properly prep the default user account, basic image generalizations, etc..)

Imaging Essentials

- Dont MANUALLY create a default user profile in XP or 7. When you sysprep windows will overwrite it with the administrator's profile. This has been the default since XP service pack 2. If you have been losing your power management settings etc.. after you sysprep this is why. For windows 7 its a setting in your unattended.xml file. Microsoft got tired of people messing up the default file permissions of default user. Reference: <http://tinyurl.com/3dlhqq8>

Imaging Essentials

- The best Windows 7 sysprep howto I've found from start to finish.
- Introduces you to Windows 7 Audit mode
- Shows how to create an unattended.xml file from start to finish for most of your basic needs.
- Link to site: <http://tinyurl.com/4kjg2xf>

Imaging Essentials

- The F12 dream. Bare metal to functioning system automatically... If you auto-PXE boot you do not even need to hit F12.
- Set your first boot option on all your computers to be PXE boot. If you do not do this then every time you want to re-image, virus scan, hard disk surface scan etc..etc.. you need a user to hit F12. If you can just remotely reboot or have the user reboot and things happen automatically via boot actions... that is awesome.
- The extra load on your deployment server for having all machines hit the PXE menu is minimal.

Imaging and App Deploy



- <http://www.appdeploy.com/>

- Rolling your own MSI's or finding MSI triggers.
- Great tools (exe to msi creator, msi viewer, [AppDeploy Repackager](#))
- AppDeploy Repackager is Freeware.
- AppDeploy Repackager allows you to create .msi files for legacy software by taking pre and post system snapshots and comparing the two.
- AppDeploy is Integrated with the Kace K1000 unit (to be reviewed later)
- MSI viewer: <http://tinyurl.com/d6yo9>
- AutoIT: Create autoIT scripts and convert to .exe to hide usernames and passwords: <http://tinyurl.com/3awmvcc>
- bat2exe: <http://www.battoexe.com/> (convert bat files to exe)

Other Software Deployment Resources

- http://wpkg.org/Category:Silent_Installers

- Has great "silent install" resources, what commands to use for what program, lists over 400 common programs, explains .iss file creations for more complicated installs.

Linbox Rescue Server (LRS)



Examining Linbox

File System	Supported	Optimized*
FAT 16/32	Yes	Yes
NTFS	Yes	Yes
Ext2/3	Yes	Yes
ReiserFS 3	Yes	Yes
XFS	Yes	Yes
JFS	Yes	No
Linux Swap	Yes	Yes

* Optimized: unused data blocks not backuped. In any case, used sectors are compressed before being saved.

Examining Linbox

- Download Demo (in either VM or traditional package form) here: <http://tiny.remc1.org/hxuov>
- If you download the VM its already licensed for 2 machines. It has 10gigs of space (but you should be able to stretch that out with Gparted).
- The software developers native language appears to be French. This will come into play later when you install the software.
- Linbox is a webmin module integrated into a custom webmin install.



Linbox Installation

- After you install/import the VM into VmWare Player (or ESXi or ESX) you will have to change the mac address to the mac listed in the installation doc since its registered for ONLY that mac address: 00:50:56:31:01:79
- When you fire up the VM for the first time a script will walk you through the initial setup.
- After the initial setup point your browser to the IP that you assigned to Linbox while running through the setup script.
- When prompted for a logon use username:root and the password you set during the setup script.

Linbox Installation



- Linbox User Manual <http://tiny.remco1.org/nkwmv>
- DHCP Options will need to reflect those set out in the manual
 - 'next-server <linbox ip address>'
 - 'filename /tftpboot/revoboot/bin/revoboot.pxe'

Linbox Adding A Client

- Two ways to add a client to linbox:
 - Manually add the information to linbox under the "Home" -> "Add a client" tab, then when we boot into the LRS, the hardware information will be populated automatically, you will then be brought to the orange boot menu
 - Boot the client into the LRS, you will be prompted with a blue and black boot screen, asked for the clients name and your linbox password, then it will update the client information and bring you to the orange boot menu
 - The default linbox password is linbox. You can change this in `/etc/lbs.conf`

Linbox Blue Boot Menu

LinboxBootLoader version 1.10

(639K lower / 130048K upper mem)

Disque Dur Local / Local Hard Disk
Ajout d'un client / Add a client

Use the ↑ and ↓ keys to select.
Press enter to boot.

Prise en compte d'une nouvelle station LBS

Default boot in 19 seconds.

Linbox Orange Boot Menu

LinboxBootLoader version 1.10

(639K lower / 130048K upper mem)

—— QEmu/docen ——

Local Hard Disk

Floppy Disk

Image creation (Shared)

Image creation (Local)

MBR Fix

Utility : Memory Test

Use the ↑ and ↓ keys to select.
Press enter to boot.

Booting on the 1st local HD

Default boot in 9 seconds.

Linbox Web Admin Console

- Home->Client List
 - System Edit Icon
 - View boot menu
 - Images (Edit boot menu)
 - Options (Set boot timeout, Set partitions to backup/image)
 - Logs: History of client activity with Linbox
- Home->Configuration->Post Installation
 - Create Post installation tasks

Linbox: Legacy computers

- For computers without PXE boot capabilities
 - Download a Linbox boot CD here: <ftp://ftp.linbox.com/pub/lrs/base/lrscd/>

Linbox Review

Rescue me from Linbox!!!

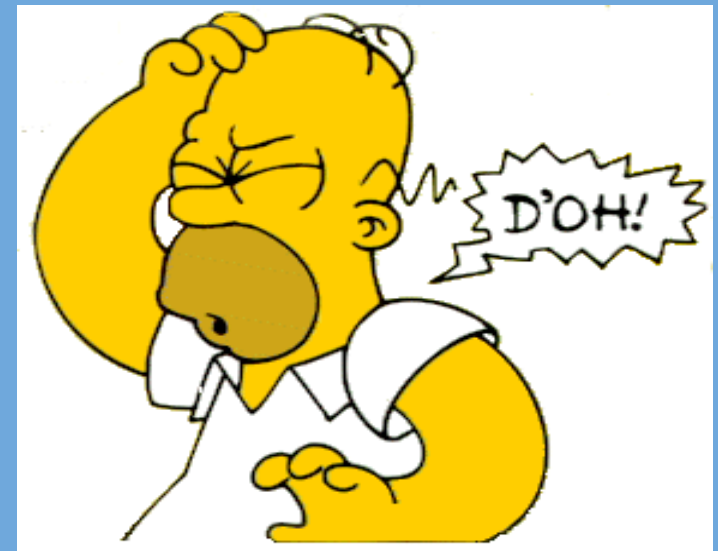
- I cant recommend Linbox
 - Deploying computers to a group is convoluted
 - Computer groups are determined by their inventory name
 - Eg: :
/GROUP/SUBGROUP/SUBSUBGROUP/COMPUTER
 - Automated deployment to a group is hard if not impossible
 - Post installation task support is limited.
 - Development is slow
 - Since development is slow, new computer NICs may not be detected properly for PXE boot.
 - It costs money. FOG (reviewing next) is free and works much better.

FOG

Free Opensource Ghost



Fog Installation



- Its easy.
- Download the fog source tarball, unzip and run the install.sh
- The Fog install will attempt to download missing packages

Hangups for RHEL/CentOS

1. The fog installation script does not provide the full path for binaries in /usr/sbin therefore you need to modify your PATH environment variable prior to running the installation script (add /usr/sbin to PATH as root or via sudo):

```
[fog]# PATH="/usr/kerberos/sbin:/usr/kerberos/bin:/usr/bin:/bin:/usr/sbin"
```

```
[fog]# export PATH
```

Fog Installation



2. Turn off SELinux

- Things simply just did not go well at all until SELinux was turned off. I had to re-install (just re-run the installation script) after turning off SELinux to get Fog to work. So, as root or via sudo:

```
[fog]# nano -w /etc/sysconfig/selinux
```

change enable line to SELINUX=disabled

Reboot.

Fog Installation

- Work arounds for small installation issues with the various CentOS versions (5.X): <http://tinyurl.com/3at3sva>



WORKAROUNDS

Sometimes they're worse than the problem you're trying to avoid.

Fog Installation

3. After the installation, make it so you can upload large applications (called snap-ins) to Fog. The default php allows you to upload is 2 megabytes. I expand this to 2 gigabytes.

```
[fog]# nano -w /etc/php.ini
```

- change the following lines to:

```
post_max_size = 2000M
```

```
upload_max_filesize = 2000M
```

- Restart apache

```
[fog]# /etc/init.d/httpd restart
```



Fog Installation

4. Setup DHCP correctly

- If, during installation, you chose to use Fog's built in DHCP server you **should** be all set.
- If you did not choose to use FOG's DHCP server (I hope all of us already have a DHCP server) then you will need to add a line/option to your dhcp server config to enable bootp/PXE booting off the FOG server.

For ICS dhcp (linux): in /etc/dhcpd.conf put these lines in your subnet scopes general section:

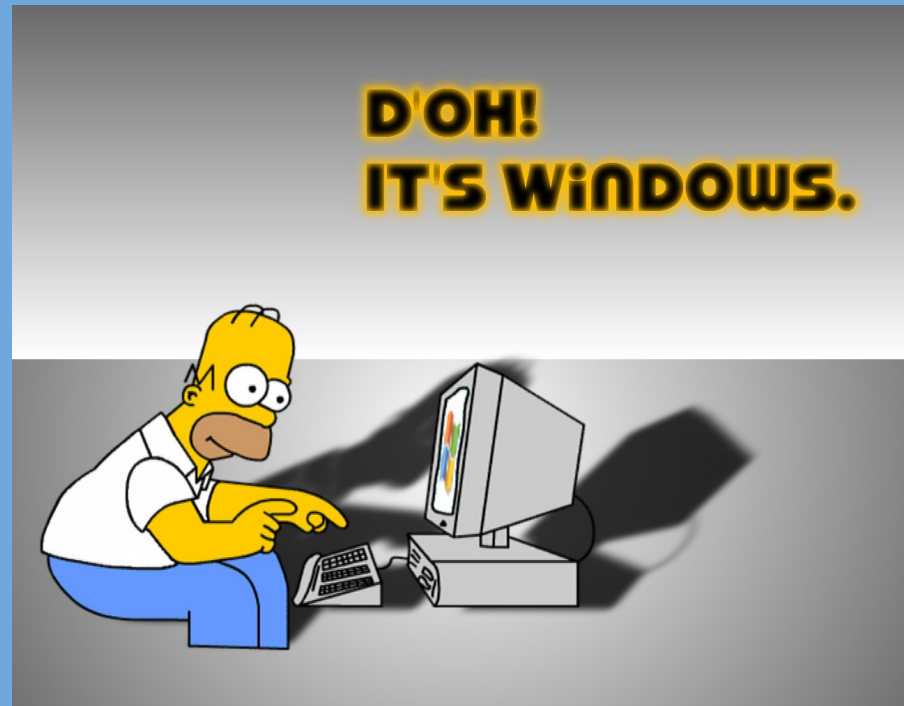
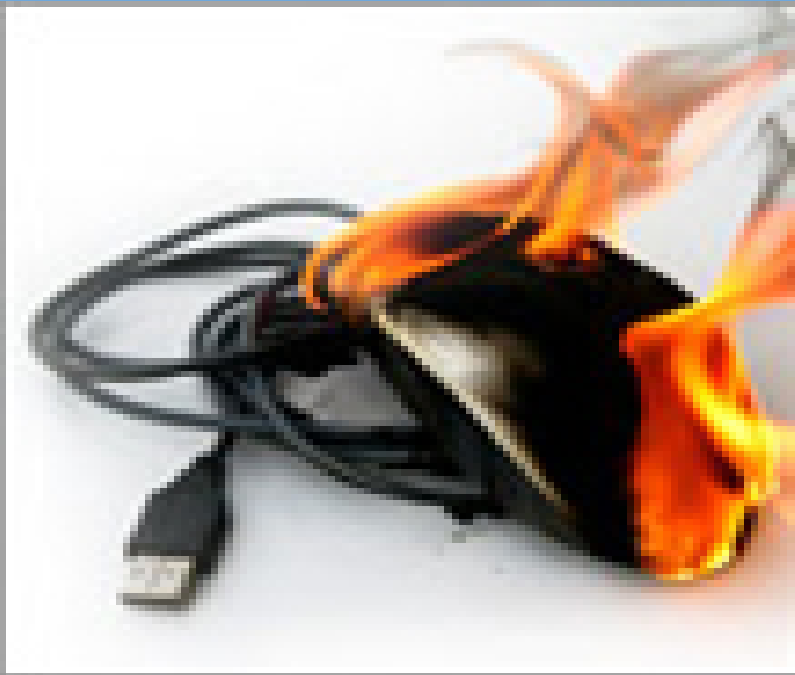
```
next-server your-fog-ip-here;  
filename "pxelinux.0";
```



Fog Installation

(dhcp continued)

For Windows Server dhcp... too many "click here" steps to list so go here: <http://tinyurl.com/26mhmz7> for a good list.



Fog Installation

- You should be all set. Browse to your FOG url using your favorite browser `http://<ip address>` (or dns name)
- Log in with the default username and password

username: fog
password: password



FOG Imaging

Methods of Importing Machines

1. Upload a comma delimited file of hostnames and mac addresses (quick for a batch, pointless for imaging one new machine).
 - CSV file format below. No header, Required fields are in bold: **MAC Address**, **Host name**, IP Address, Description, OSID , ImageID
 - The OSID and ImageID can be found in the OS and Image drop downs next to each OS and Image definition.
2. Add the computer by hand into FOG via the Web Interface (quick for one new machine image, obviously slow for a batch).
3. PXE boot the machine and do a quick inventory right from the PXE boot prompt.

FOG PXE Boot

FOG Computer Cloning Solution

Boot from hard disk

Run Memtest86+

Quick Host Registration and Inventory

Perform Full Host Registration and Inventory

Quick Image

Client System Information

Debug Mode

Boot from the local hard drive.
If you are unsure, select this option.

FOG
www.fogproject.org

An open source computer cloning solution

created by: Chuck Syperiski & Jian Zhang

FOG Imaging

Fog and General imaging standards

- Once your machine has been through Quick Inventory it should now show up in the Fog web interface.
- Prep your computer. INSTALL THE FOG CLIENT
- RUN FOG PREP PRIOR TO SYSPREP
- Both are located here: <http://yourserver/fog/client/>
- Sysprep your machine in accordance with the "Imaging Essentials" section above.
- You can now assign tasks to the host
- Click on the host then select basic tasks.
- Upload an image to start with. Assign the basic task "Upload Image". If you want the task to execute immediately next time the machine netboots then dont schedule it. Just click the "Upload Image" button.

Pulling an Image with FOG

- Upon rebooting into PXE/network boot it should automatically start grabbing your image.

```
save partition to image file
Partition to save:...../dev/sda1
Size of the Partition:.....3.65 GiB = 3923426304 bytes
Current image file:...../tmp/pigz1
Image file size:.....72.00 MiB
Available space for image:...231.86 MiB = 243118080 bytes
Detected file system:.....ntfs
Compression level:.....None

Time elapsed:..... 5sec
Estimated time remaining:.... 1m:30sec
Speed:.....857.25 MiB/min
Data copied:.....71.44 MiB / 1.33 GiB

5% 5 %

copying used data blocks [* to cancel, CtrlS to pause, CtrlQ to resume]
```

Deploying a computer with FOG

- To use FOG effectively, the computer(s) you intend to image should be preloaded into FOG before hand. This can be done utilizing the 3 methods we outlined before (CSV upload, type by hand into web interface, boot into PXE and do a quick inventory)
- Add machines to a group
- Assign an image to the group
- Assign snap-ins (application installs) to the group for installation after imaging.
- Setup and enable auto-join to AD domain if necessary (see next slide)
- Make sure all the computers you are imaging are set to PXE boot as the first boot option (as outlined earlier).
- Power on the machines. They should start pulling the image automatically after PXE booting.

Deploying a computer with FOG

Auto joining to an AD domain

- Requires **Fog Crypt** (windows app included in the original download package)
- Requires Fog Crypt to be recompiled with a new encryption key. Dont worry, its easy, instructions here: <http://tinyurl.com/3w5lwgt>
- Follow the fairly easy instructions to change the default fogcrypt encryption key. Instructions also go over encrypting your domain login and pasting it into FOG
- Domain join will happen after image deployment to that group or computer.



App, Printer and Advanced Settings deployment

- Requires that the fog client be installed on every machine you want to manipulate.
- The Fog client should be included in your images. Its required to join a domain via Fog and push out snap-ins after deployment.
- To install the fog client after the fact, here is the silent install string: `setup.exe fog-defaults=true /qb`
- The `fog-defaults=true` sets all features to "enabled"

FOG Client Features

Deploying Advanced Settings

- If needed, manipulate config manually here:
c:\program files\fog\etc\config.ini
- **Auto Log Off** (0.16)--> Auto logs off after inactivity period
- **Hostname Changes**--> Changes machine host name to that in FOG. Client compares at every checkin. AD compat.
- **Active Directory Integration**--> Joins PC to domain
- **Directory Cleaner** (0.16)--> Auto cleans specified directories at user logoff.
- **Display Manager** (0.16)--> Auto sets screen resolution at login.
- **Green FOG** (0.16)--> Reboot or shut off computers on a schedule regardless of user logon.

FOG Client (advanced Settings)

- **Host registration**--> Never used this but I guess it registers extra mac addresses on already existing hosts.
- **Task Restarting**--> Restarts a machine if Client detects the machine has been assigned a deployment task and nobody is logged in.
- **Snapin Installation**--> Allows installation of snap-ins at client check in. Interval defined in config.ini of client (10min). Client will wait 5min after startup before checking in.
- **User Tracker**--> Tracks user logins
- **Printer Manager**--> Checks on service startup for new printer tasks.
- **User Cleanup (0.16)**--> This module will remove all users not white listed in management portal on log off. Will white list based on the beginning portion of the entry. For instance if you whitelist admin then admin and administrator will be whitelisted.

FOG Client (Continued)

- **Client Updater**--> Auto updates the Fog Client if a new version is detected.

Deploying Applications with FOG

- Requires the FOG client (should be in your images)
- Done via the Snap-Ins Section
- Can be assigned to groups or individual hosts
- Cannot see what snap-ins are assigned to a group because your not really assigning the snapin to a group your associating the snap-in to the hosts within the group.
- Re-applying a snap-in (or re-removing it) from a group is not an issue though. If in doubt just re-apply or remove the snap-in to the group.
- Once you have deployed the snap-in it will never re-deploy if the user uninstalls the program. That wont be an issue though because your users dont have administrator or power user rights. Correct? <http://tinyurl.com/lxw5vz>
- You need to create a snap-in to uninstall an application too. This is optional though.

Deploying Printers with FOG

- Incredible simple. Works just like deploying software.
- Drivers must be on a public read-only share

KACE KBOX 2000 Deployment Center



Examining KBOX2000



- www.kace.com

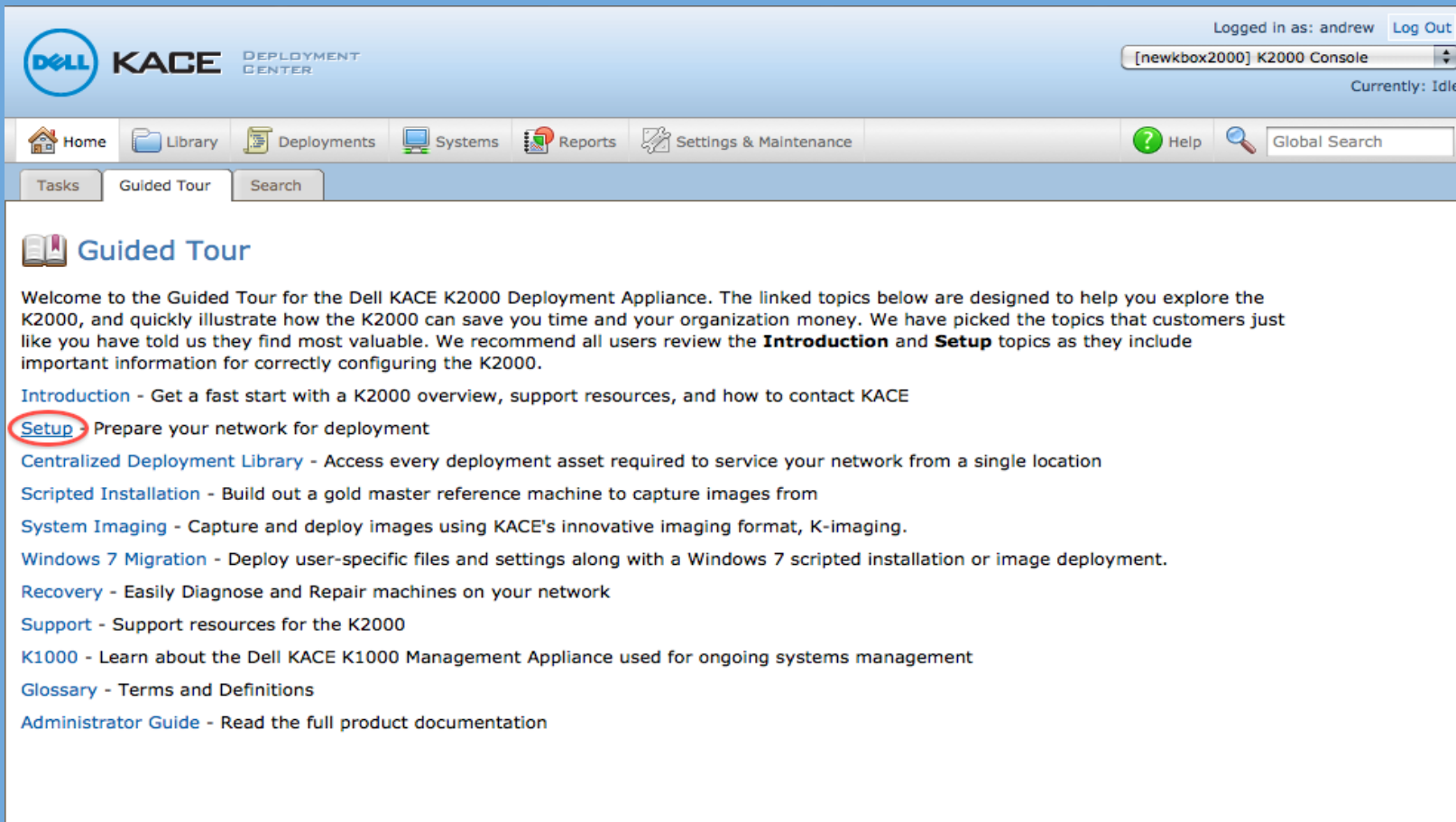
- High monetary cost - For a shop with 1000 machines, cost would be about \$7000 up front and about \$1500 per year for support.
- Has great support, 6am-4pm PST, live chat, phone, ticket system, good priority system for those issues that make your system inoperable
- Integrated with Dell, has added features for shops that use only Dell machines (driver updates, hotfix patches)

KBOX2000 Installation

- KBOX2000 can be downloaded from www.kace.com with your KACE login, comes in an .ovf file that can be converted into VMware, VM is currently limited to a 220GB drive
- Future versions (Kace says the next version) will allow you to add your own external storage.
- Requires some configuration, from the console of your VM need to set admin password, IP, domain name. You are walked through performing these steps. No command line necessary.
- Once configured, you can get to the KBOX2000 by pointing your web browser at its IP address or DNS name

KBOX2000 Installation

- After you install your KBOX2000 Server, it is important to take the guided tour of your new appliance
- In the next slide we will be specifically reviewing the "setup" portion of the tour



The screenshot displays the Dell KACE Deployment Center web interface. At the top, the Dell KACE logo is on the left, and the user is logged in as 'andrew' with a 'Log Out' link on the right. Below the logo, a navigation bar contains icons and labels for Home, Library, Deployments, Systems, Reports, and Settings & Maintenance. A 'Help' icon and a 'Global Search' input field are also present. Below the navigation bar, a secondary bar shows 'Tasks', 'Guided Tour' (which is selected), and a 'Search' button. The main content area is titled 'Guided Tour' and contains a welcome message. Below the message, a list of links is provided, with 'Setup' circled in red. The links include Introduction, Setup, Centralized Deployment Library, Scripted Installation, System Imaging, Windows 7 Migration, Recovery, Support, K1000, Glossary, and Administrator Guide.

Logged in as: andrew [Log Out](#)
[newkbox2000] K2000 Console
Currently: Idle

Home Library Deployments Systems Reports Settings & Maintenance Help Global Search

Tasks Guided Tour Search

Guided Tour

Welcome to the Guided Tour for the Dell KACE K2000 Deployment Appliance. The linked topics below are designed to help you explore the K2000, and quickly illustrate how the K2000 can save you time and your organization money. We have picked the topics that customers just like you have told us they find most valuable. We recommend all users review the **Introduction** and **Setup** topics as they include important information for correctly configuring the K2000.

[Introduction](#) - Get a fast start with a K2000 overview, support resources, and how to contact KACE

[Setup](#) - Prepare your network for deployment

[Centralized Deployment Library](#) - Access every deployment asset required to service your network from a single location

[Scripted Installation](#) - Build out a gold master reference machine to capture images from

[System Imaging](#) - Capture and deploy images using KACE's innovative imaging format, K-imaging.

[Windows 7 Migration](#) - Deploy user-specific files and settings along with a Windows 7 scripted installation or image deployment.

[Recovery](#) - Easily Diagnose and Repair machines on your network

[Support](#) - Support resources for the K2000

[K1000](#) - Learn about the Dell KACE K1000 Management Appliance used for ongoing systems management

[Glossary](#) - Terms and Definitions

[Administrator Guide](#) - Read the full product documentation

KBOX2000 KBE Creation

- The KBOX2000 uses a customized version of Windows Pre-installation Environment to perform scripted installs and imaging (called the Kace Boot Environment)
- The KBE offers many tools and options on a graphical interface. When you boot into the KBE you can do a: scripted install, imaging (push and pull), command prompt, file browser.
- Windows Automated Installation Kit (WAIK) is a tool from Microsoft that includes the WinPE environment. <http://tinyurl.com/36wzsc6>
- Steps to create your KBE will also require you to install the "Media Manager" from the KBOX2000 to upload/create your first KBE environment.

KBOX2000 KBE Creation

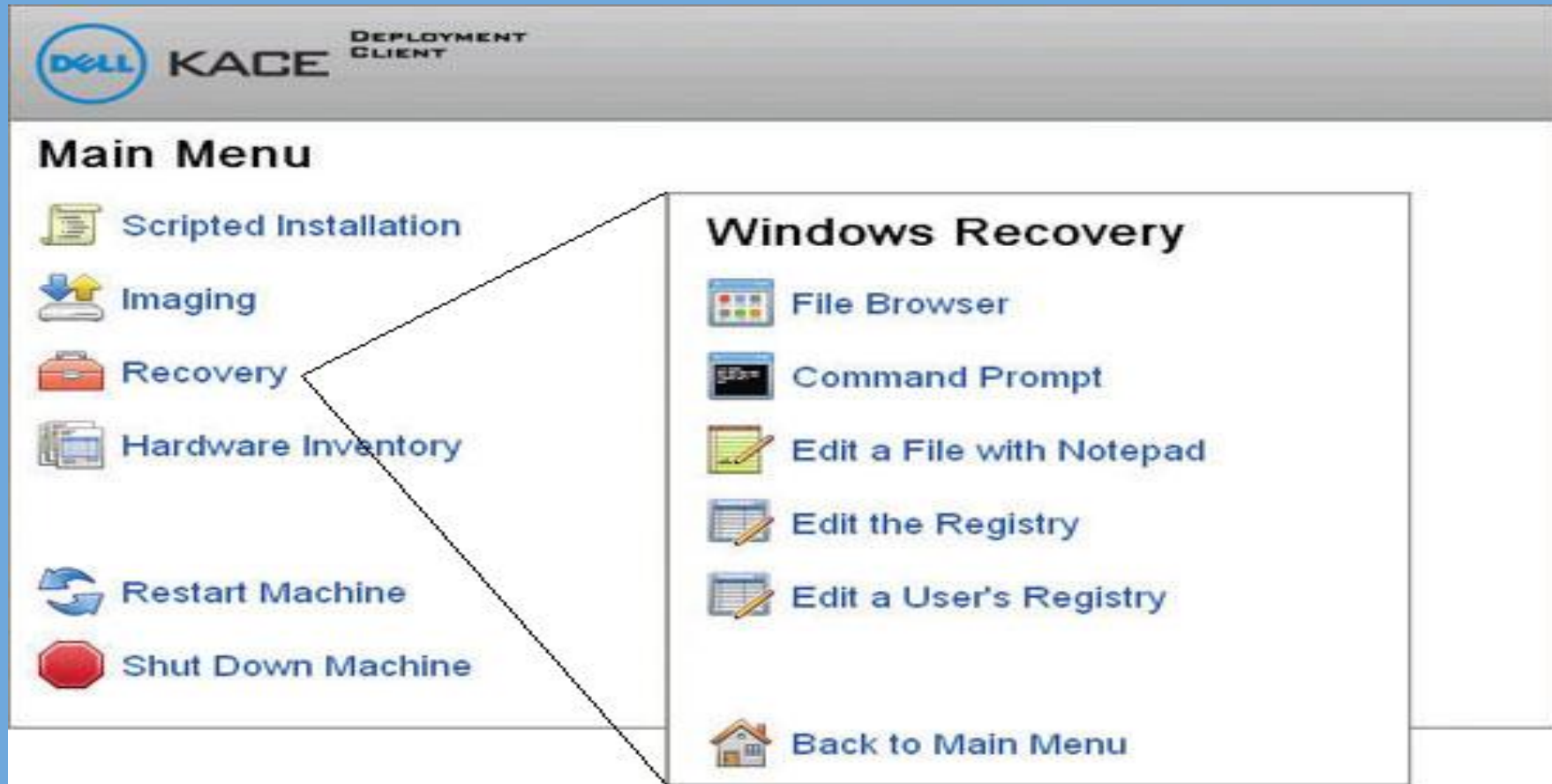
- Make sure the necessary drivers are in your boot environment by attempting to boot into it on a target PC
 - Place missing drivers here (in raw form with a .inf file):
\\yourkbox\drivers\yourOS\Organize in folders
 - Re-cache driver share
 - Re-do the KBE environment by re-uploading with the media manager.

KBOX2000 Driver Feed

- Driver feed has drivers for all Dell machines in recent history.
- Working on getting HP into the driver feed but they are reportedly ignoring their requests. Contact your HP rep.



KBOX2000 KBE: Windows Recovery



- Example of the KBE boot environment
- When you have a KBE environment working you can pull images and perform scripted installs.

KBOX2000 KBE: In Depth Look

- When you boot into the KBE you can do a:
- Scripted install,
- Imaging (push and pull),
- command prompt
- File browser to browse and change files on the computer
- Edit the Users registry
- Edit the whole registry
- Hardware Inventory (to detect and fix unknown device issues)
- VNC into the KBE environment remotely via the Kbox Web Interface for remote troubleshooting using the features above.

KBOX2000 OS Deployment Methods:

- Scripted install
 - Supports pre and post install tasks
 - Scripted installs are like installing the OS off CD except it uses an ISO of the OS and Kace automates the procedure.
- Image
 - Supports pre and post installation tasks.

KBOX2000 Scripted Install

- Using the "Media Manager" we can upload an .iso into the KBOX2000 that we can boot off of from our KBE
- Using the KBOX2000 "Scripted Install" creation wizard, we can even create an answer file to completely automate a zero to running installation of an .iso on a machine, just as if we were installing from a disc
- This can be handy for creating our initial XP image, as well as troubleshooting situations where our images do not work
- For Windows 7, we will want to mostly use Scripted Installations since only a cab file is uploaded to the computer vs XP where many small files are copied and there are multiple reboots during an XP install



KBOX2000 Scripted Install

- In most situations with Windows 7, we will want to do a Scripted Install (as mentioned previously)
- Per KACE, these usually take 18-20 minutes, should be completely automated
- Drivers during a scripted install are taken care of by the KBOX2000, there is a drivers share with network and mass storage drivers, then Windows Update should take care of the rest
- The KBOX2000 does NOT install the 100MB partition as part of the installation
- Our own test of the Scripted Install takes a little over 21min over a Gigabit connection

KBOX2000 Scripted Install

- From KACE: When creating a scripted install of Windows 7 the only pre installation task you need is "Create Single Partition"
- In the KBOX2000 Web UI, under the "Reports" tab, we can look at the deployment report to see how long each and every one of our Scripted Installs and Images take, and whether or not they succeeded

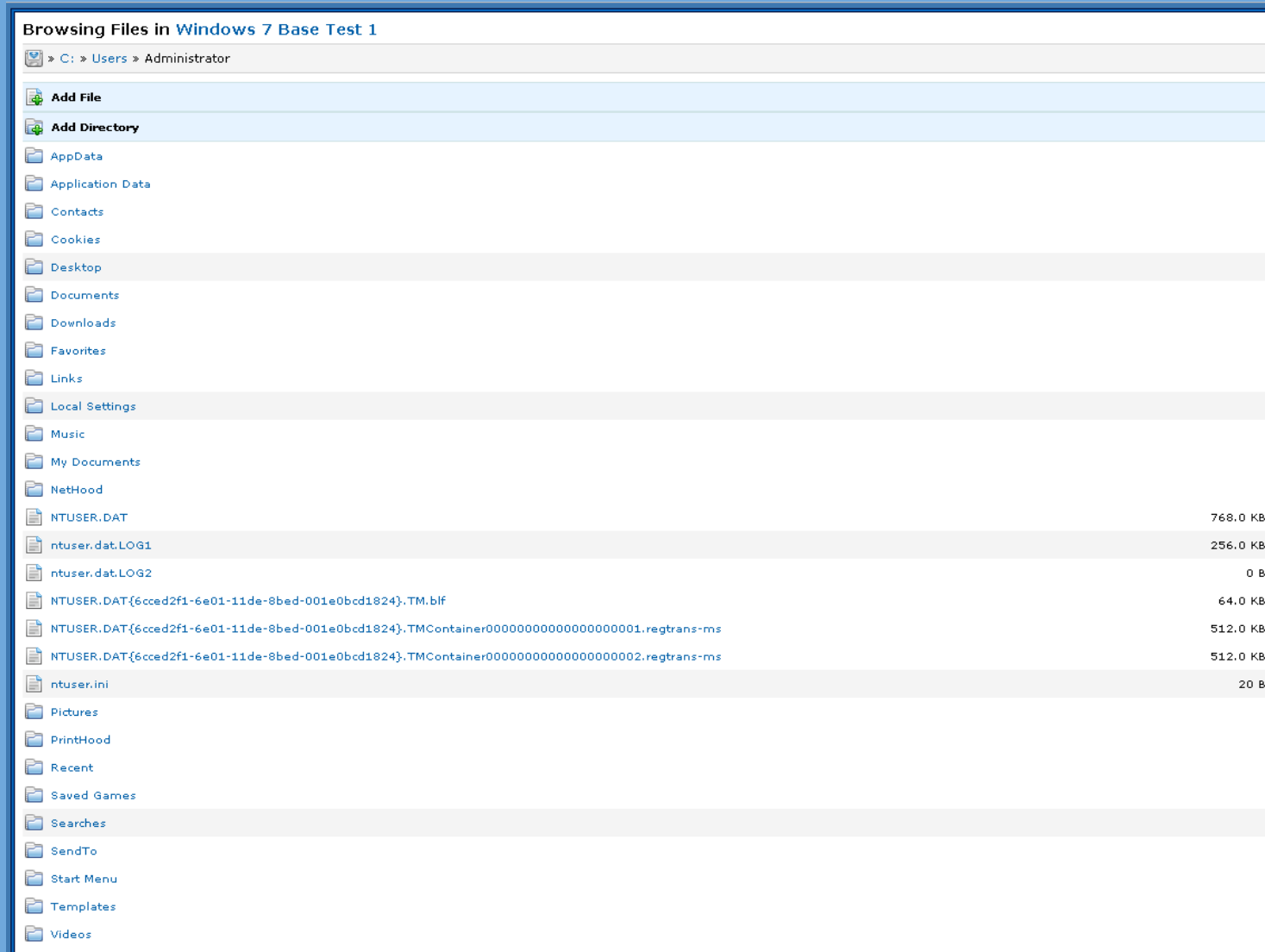
KBOX2000 Imaging Features

- Imaging with the KBOX2000 gives you many advanced features, KBOX images are called "K-Images"
 - You can edit any KBOX2000 image directly from the KBOX2000 web interface to add, edit, and remove files from your image
 - KBOX2000 uses Data Deduplication on its images, both for pushing and pulling (makes it go fast!)
 - Pre-install tasks allow you to steal the machines name before imaging, to reapply it after imaging
 - Machine names are pulled and stored in a file named after the computers mac address in `//kbox/petemp`



KBOX2000 Imaging Features

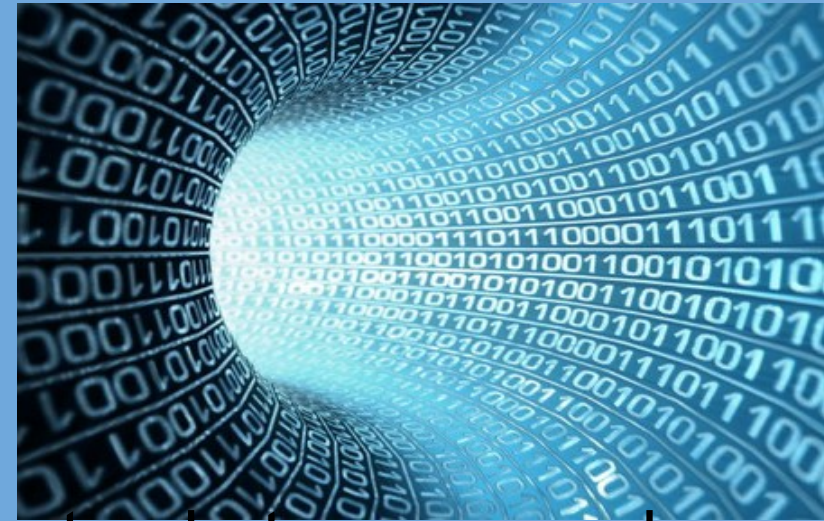
Browsing a Windows 7 image, in this example we are adding/removing files in the Administrator profile



KBOX2000 Imaging Features

De-Duplication

- Images are File Based and hashed, duplicate files aren't copied from the machine or to the machine during imaging (push or pull)
- This not only makes our images go faster, but saves much network bandwidth as well
- The two imaging sessions below are an example of an initial image, and then a reimage using deduplication, taking half of the time and using essentially no bandwidth
- The picture below is from the "Reports" section of the KBOX2000 we spoke about earlier

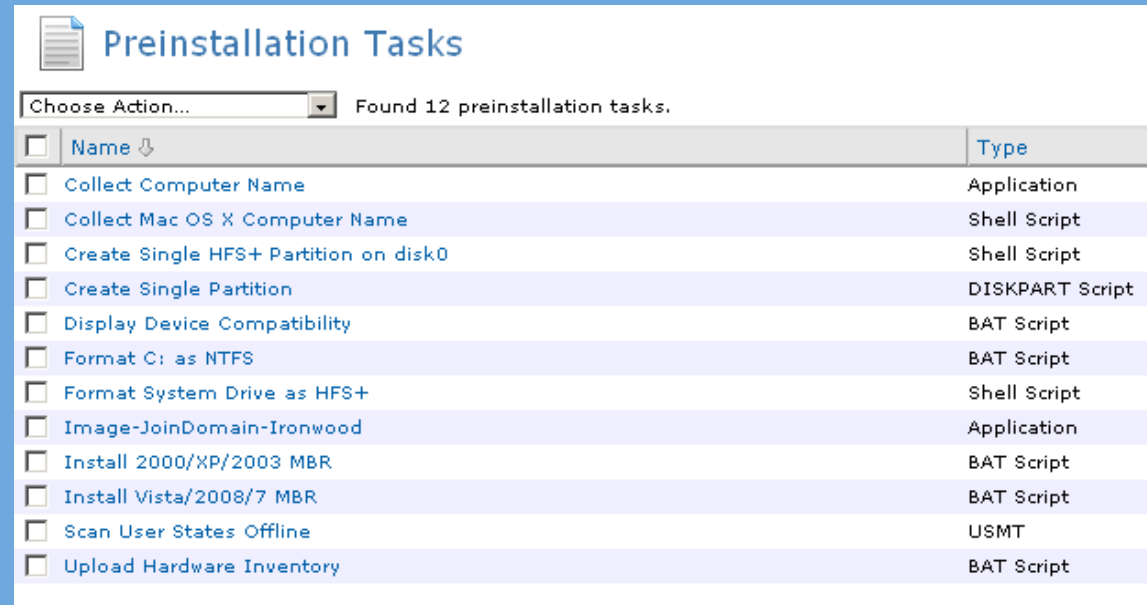


Host	MAC Address	Machine Information	System Image	Server IP	Deploy Started	Deploy Completed	Duration
172.17.41.150	00:24:81:11:53:05	Hewlett-Packard HP Compaq dc5800 Small Form Factor 2UA916011R	Windows 7 Base Test 1	172.16.20.69	Fri Apr 29 15:05:27 2011	Fri Apr 29 15:16:22 2011	10m 55s
172.17.41.150	00:24:81:11:53:05	Hewlett-Packard HP Compaq dc5800 Small Form Factor 2UA916011R	Windows 7 Base Test 1	172.16.20.69	Fri Apr 29 13:54:42 2011	Fri Apr 29 14:16:55 2011	22m 13s

KBOX2000 Imaging Features

Pre-installation Tasks

- We can do many things to a machine even before we start our imaging
- Ex: Collect Computer Name, Format the disk as NTFS, Create Single Partition, Install MBR
- We normally will not want to format the disk as NTFS, as this will really decrease the benefits that de-duplication has to offer



<input type="checkbox"/> Name ↓	Type
<input type="checkbox"/> Collect Computer Name	Application
<input type="checkbox"/> Collect Mac OS X Computer Name	Shell Script
<input type="checkbox"/> Create Single HFS+ Partition on disk0	Shell Script
<input type="checkbox"/> Create Single Partition	DISKPART Script
<input type="checkbox"/> Display Device Compatibility	BAT Script
<input type="checkbox"/> Format C: as NTFS	BAT Script
<input type="checkbox"/> Format System Drive as HFS+	Shell Script
<input type="checkbox"/> Image-JoinDomain-Ironwood	Application
<input type="checkbox"/> Install 2000/XP/2003 MBR	BAT Script
<input type="checkbox"/> Install Vista/2008/7 MBR	BAT Script
<input type="checkbox"/> Scan User States Offline	USMT
<input type="checkbox"/> Upload Hardware Inventory	BAT Script

KBOX2000 Imaging: XP vs Vista/7



- Windows XP will require multiple images based on each model machine you are working with
 - The easiest way to create multiple images is by making a Scripted Install for Windows XP, and then running it on each machine model we want an image for
 - Due to De-Duplication, our many XP images will take up minimal space on the KBOX2000 unit
 - We will generally want to do an Image over a Scripted Install for Windows XP
-



- Thanks to a redesigned installer, we will really only ever want to do a Scripted Install of Windows 7
- With the new installer, a single .cab file is moved from the KBOX2000 to the machine during installation

KBOX2000 Post-Installation Tasks

- Post-Installation tasks can be tied to both Scripted Installs and Images
- Ex: Join a Domain, Install KBOX1000 Agent, Enable/Disable Services, Registry Changes, Install Software



The screenshot shows a window titled "Postinstallation Tasks". At the top, there is a "Choose Action..." dropdown menu and a status bar indicating "Found 41 postinstallation tasks." Below this is a table with two columns: "Name" and "Type". The table lists various tasks, each with a checkbox in the "Name" column. The tasks include domain joining, KBOX 1000 Agent software installation, and various scripts for system configuration.

Name	Type
<input type="checkbox"/> Example: Join Active Directory Domain (10.5/10.6)	Shell Script
<input type="checkbox"/> Example: Join Domain	Application
<input type="checkbox"/> Image-JoinDomain-CCISD	Application
<input type="checkbox"/> Image-JoinDomain-CTS	Application
<input type="checkbox"/> Image-JoinDomain-Hancock	Application
<input type="checkbox"/> Image-JoinDomain-Houghton	Application
<input type="checkbox"/> Image-JoinDomain-Ironwood	Application
<input type="checkbox"/> Image-JoinDomain-Lakelinden	Application
<input type="checkbox"/> Join Domain - Adams	Application
<input type="checkbox"/> Join Domain - Bessemer	Application
<input type="checkbox"/> Join Domain - CCISD	Application
<input type="checkbox"/> Join Domain - CTS	Application
<input type="checkbox"/> Join Domain - Dollarbay	Application
<input type="checkbox"/> Join Domain - EwenTC	Application
<input type="checkbox"/> Join Domain - Hancock	Application
<input type="checkbox"/> Join Domain - Houghton	Application
<input type="checkbox"/> Join Domain - Ironwood	Application
<input type="checkbox"/> Join Domain - Lake Linden	Application
<input type="checkbox"/> Join Domain - Ontonagon	Application
<input type="checkbox"/> Join Domain - Wakefield	Application
<input type="checkbox"/> Join Domain - Watersmeet	Application
<input type="checkbox"/> KBOX 1000 Agent Software 5.0.25648 Mac OS X	K1000 Agent
<input type="checkbox"/> KBOX 1000 Agent Software 5.1.31821	K1000 Agent
<input type="checkbox"/> KBOX 1000 Agent Software 5.1.33668	K1000 Agent
<input type="checkbox"/> Script - Apply Computer Name	Application
<input type="checkbox"/> Script - Apply Mac OS X Computer Name	Shell Script
<input type="checkbox"/> Script - Change Workstation Name	Naming Rule
<input type="checkbox"/> Script - Disable Firewall	BAT Script
<input type="checkbox"/> Script - Disable SFS	BAT Script
<input type="checkbox"/> Script - Force Checkin - Windows	BAT Script
<input type="checkbox"/> Script - MASTER - Rename Machine	Naming Rule
<input type="checkbox"/> Script - MoveWsname	Application
<input type="checkbox"/> Script - RenameMachine - Master	Application
<input type="checkbox"/> Script - Restart Now	BAT Script
<input type="checkbox"/> Software - Microsoft .NET Framework Version 1.1...	Application

Steps For Deployment (6 Easy Steps!)

1. Create managed installs of all software you would like installed in the KBOX1000
2. Scan your MAC Addresses into a CSV
3. Copy/Paste the MAC's into the namedb.dat file in the KBOX2000 Post-Installation Task "Name Machine", give the machines names, please note that it is important to have a very functional naming scheme to allow for Smart Labels based on machine name.
4. Copy/Paste the MAC's into a Boot Action and set it to "Scripted Install - Windows 7", make sure to have a post-installation task to install the KBOX1000 Agent after the scripted install completes
5. Create a Smart Label that will find these machines based on "System Name" and add all of the software you would like on these machines to it
6. Boot your machines and sit back



KBOX2000 Post-Installation Tasks

- You can create Post-Installation tasks to push software, but there is no software inventory system, which means once the Post-Installation tasks have run on the KBOX2000, the computer is on its own for updates and other software you may have forgotten
- For this reason we would like to also introduce to you the KBOX1000 Management Center
- With the KBOX1000, all tasks become dynamic and automated, so the only post-install task you have is to sit back and relax



KBOX 2000

User State Migration Tool (USMT)

- Capture the user states (profiles) off a machine prior to re-imaging or re-installing via scripted install
- Re-deploy the user states to a new machine.
- Theoretically, to upgrade a users hardware:
 - Create a USMT capture boot action.
 - Reboot their machine
 - Capture the user profiles from their machine.
 - Ship them new the new machine with PXE boot enabled as default boot device.
 - Create Script Install/Image boot action and PXE boot new machine.
 - Re-deploy their user profiles.

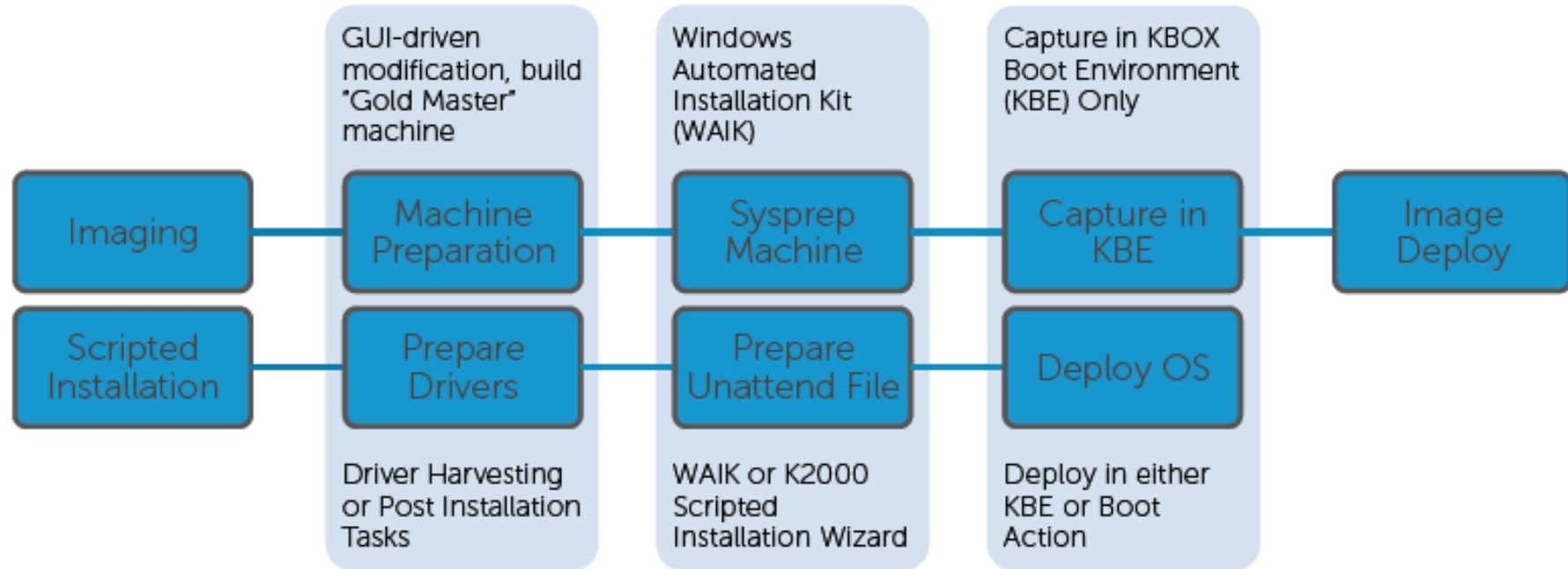


KBOX 2000

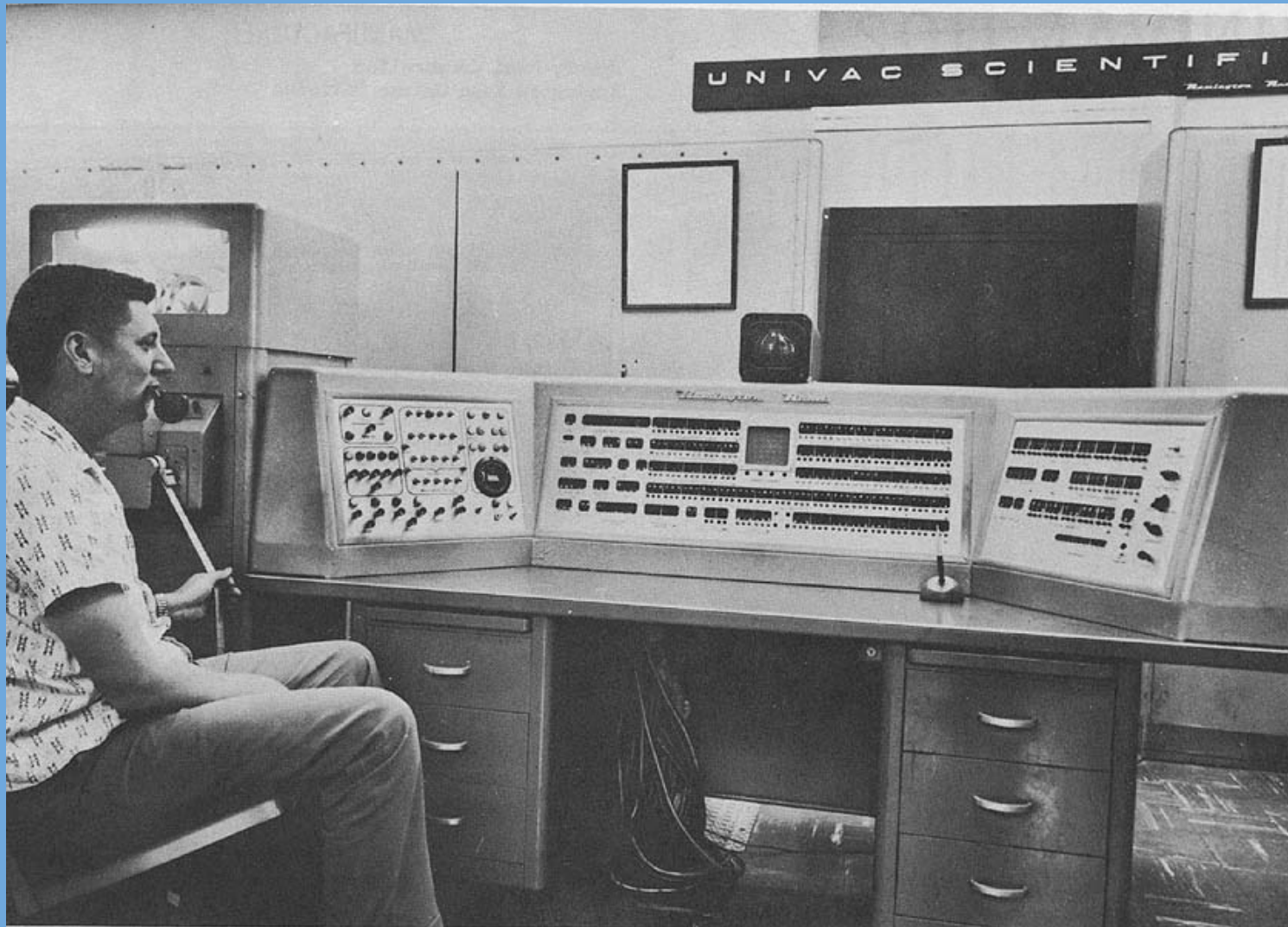
User State Migration Tool (USMT)

- Can upload USMT version 3.0.1 or version 4
- Version 4 supports windows XP SP3 or higher
- Version 3 is the ONLY version that will migrate profiles from a XP machine to another XP machine.
- Use version 4 for updating an XP SP3 machine to 7
- You can only have USMT version 3 OR version 4 enabled at one time. You can switch between the two versions but you have to re-upload every time you do this.
- You upload the USMT to the Kbox 2000 with the Kace Media Manager just as you would upload a Windows ISO

KBOX2000 OS Deployment Process



KACE KBOX1000 Management Center



Examining KBOX1000

- Integrates with LDAP/AD, Does Software Distribution, Service Desk/HelpDesk, Device Discovery/Inventory, Reporting, Web Console
- AD integration allows your users to log in and install/manage their own computer based on rights you give them.
- Integrates with KBOX2000 as the "after imaging" tool, KBOX1000 will provide its inventory for the KBOX2000, allows for seamless switching between the two Web UI's
- Extremely powerful tool
 - Ex: unfreeze 140+ machines, install firefox, update AVG, refreeze in just under 45 minutes
- Costs more money, roughly 4x as much per license as the KBOX2000

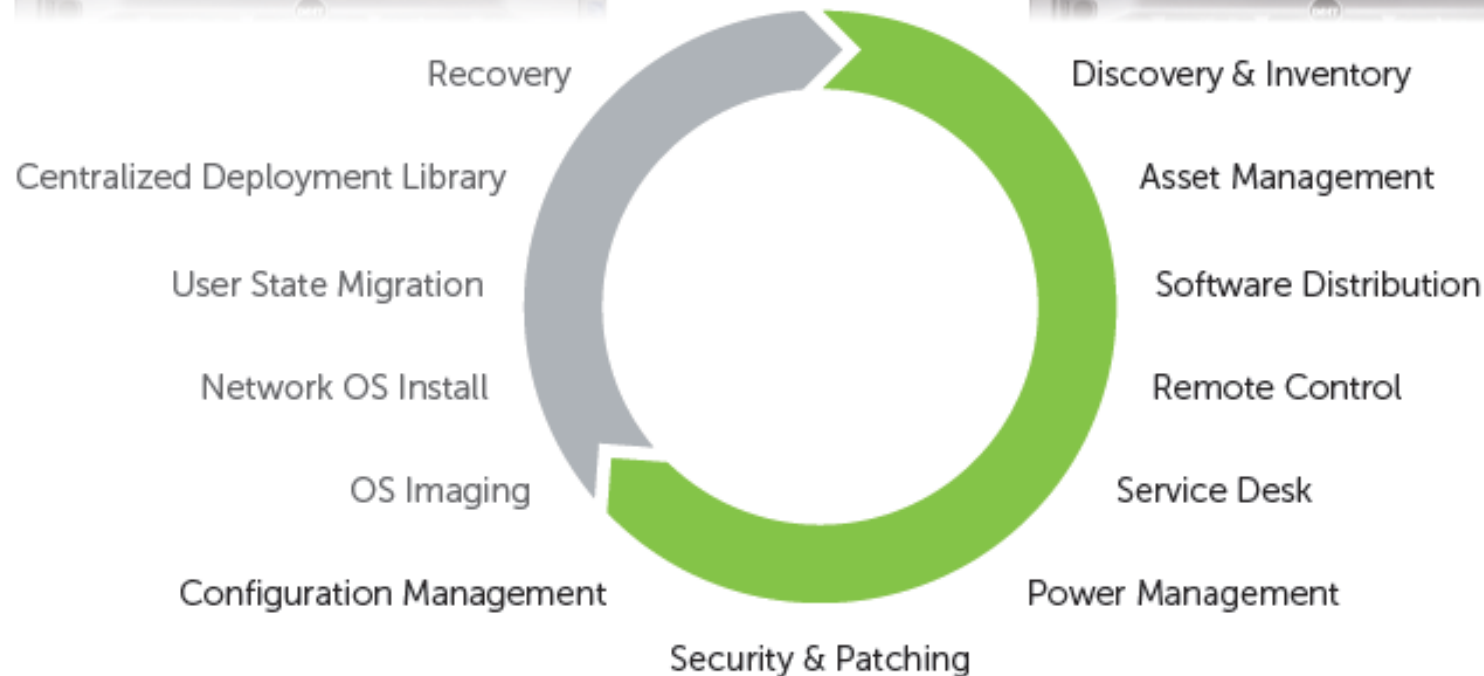
Examining KBOX1000

Computer Lifecycle Management

KACE K2000 Deployment Appliance



KACE K1000 Management Appliance



KBOX1000 Installation



Dont sweat it.



Its easy



KBOX1000 Installation


- Import the K1000 VM
- Boot it
- The setup wizard runs and asks for an IP and Master Password
- Done



KBOX1000 Machine Inventory

- Searchable by Name, IP, last user logged in
- Machine actions available by IP address, allows for one click VNC, ping, RDP, SSH, can be configured for other actions, blue and white symbols. One click VNC only works if you push out your own VNC server. Machine action smart buttons are editable.
- Green symbol on left shows "AMP connection," whether or not a machine is up and running with the KACE Client
- If you click on a machine you are brought to the machines inventory which has lots of information regarding the machine (printers, software, OS, Hardware info etc..

KBOX1000 Machine Inventory



User: andrew [Log Out](#)
Organization: REMC#1

[Home](#) [Inventory](#) [Asset](#) [Distribution](#) [Scripting](#) [Security](#) [Help Desk](#) [Reporting](#) [Settings](#) [Help](#)

[Computers](#) [Software](#) [Processes](#) [Startup](#) [Service](#) [IP Scan](#) [MIA](#)

Computer Inventory

View by: All Items [Search](#)
[Advanced Search](#) [Create Smart Label](#) [Create Notification](#)

Choose Action ▾ Showing 1-150 of 2778 computers. [\[Next\]](#)

<input type="checkbox"/>		Name [labels hidden]	Last Sync ↓	Description	IP	Last User
<input type="checkbox"/>		DB1403	7s	Elm Lab	10.80.52.3	f19
<input type="checkbox"/>		ont1283	9s	HS Lab 137 ONT1283	10.50.62.19	18macombbee
<input type="checkbox"/>		HTN1143	10s		10.100.46.43	empty
<input type="checkbox"/>		ont1280	18s	ONT1280 HS Lab 137	10.50.62.16	hockey
<input type="checkbox"/>		wts1029	24s	wts1029Lib01	10.190.59.111	mlomastro
<input type="checkbox"/>		ont1284	26s	ONT1284 HS Lab 137	10.50.62.20	13ashley
<input type="checkbox"/>		DB1413	27s	Elm Lab	10.80.52.13	18ozanicha
<input type="checkbox"/>		HTN1228	27s		10.100.55.27	17hamling
<input type="checkbox"/>		HTN1216	44s		10.100.55.15	15risera
<input type="checkbox"/>		cc1145	47s		10.20.100.137	chill
<input type="checkbox"/>		HTN1227	48s		10.100.55.26	15bastianc
<input type="checkbox"/>		HTN1204	48s		10.100.55.4	15runionj
<input type="checkbox"/>		HTN1207	48s		10.100.55.7	15lylee2
<input type="checkbox"/>		HTN1220	48s		10.100.55.19	13keskimaj
<input type="checkbox"/>		HTN1222	51s		10.100.55.21	15huffmase
<input type="checkbox"/>		HTN1202	57s		10.100.55.2	15anzalonn
<input type="checkbox"/>		HTN1214	58s		10.100.55.13	13hyslopi
<input type="checkbox"/>		HTN1218	59s		10.100.55.17	13woodforl
<input type="checkbox"/>		HTN1229	1m		10.100.55.28	15schmidt
<input type="checkbox"/>		HTN1205	1m		10.100.55.5	15demsket
<input type="checkbox"/>		HTN1208	1m		10.100.55.8	15rudkinb
<input type="checkbox"/>		DB1426	1m	Elm Lab	10.80.52.26	17rogane
<input type="checkbox"/>		HTN1225	1m		10.100.55.24	15donnells
<input type="checkbox"/>		HTN1224	1m		10.100.55.23	15revoyra
<input type="checkbox"/>		HTN1206	1m		10.100.55.6	15riuttab
<input type="checkbox"/>		HTN1215	1m		10.100.55.14	15tellina
<input type="checkbox"/>		HTN1213	1m		10.100.55.12	15rudkinb
<input type="checkbox"/>		HTN1201	1m		10.100.55.1	16russellb
<input type="checkbox"/>		htn1209	1m		10.100.55.9	15murphyj
<input type="checkbox"/>		DB1238	2m	Rm 107 Teacher	10.80.40.14	kuuree
<input type="checkbox"/>		Iwd1161-Nor203	2m	Teacher Workstation TKO Dell Optip...	10.150.42.20	naho
<input type="checkbox"/>		ETC1017	2m	BST	10.200.58.2	20anttilak


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KBOX1000 Software Inventory

- Contains information regarding Vendor, Version, Date Added, size of the file attached, and designated OS's for each software record in the inventory
- The icon to the left of each inventory record lets you know that there is a file/package attached to the record



KBOX1000 Software Inventory



MANAGEMENT
CENTER

User: andrew [Log Out](#)

Organization: REMC#1

Global Search

[Home](#) [Inventory](#) [Asset](#) [Distribution](#) [Scripting](#) [Security](#) [Help Desk](#) [Reporting](#) [Settings](#) [Help](#)[Computers](#) [Software](#) [Processes](#) [Startup](#) [Service](#) [IP Scan](#) [MIA](#)

Software

View by: Windows Mozilla Firefox [Search](#)

[Advanced Search](#) [Create Smart Label](#)

Choose Action ▼ Found 48 titles.

<input type="checkbox"/>	<input type="checkbox"/>	Name [labels hidden]	Computers ↑	Version	Publisher (Vendor)
<input type="checkbox"/>		Mozilla Firefox 4.0 (x86 en-US)	1337	4.0	Mozilla
<input type="checkbox"/>		Mozilla Firefox (3.6.13)	234	3.6.13 (en-US)	Mozilla
<input type="checkbox"/>		Mozilla Firefox (3.6.7)	213	3.6.7 (en-US)	Mozilla
<input type="checkbox"/>		Mozilla Firefox (3.6.8)	127	3.6.8 (en-US)	Mozilla
<input type="checkbox"/>		Mozilla Firefox (3.6.12)	113	3.6.12 (en-US)	Mozilla
<input type="checkbox"/>		Mozilla Firefox (3.0.1)	69	3.0.1 (en-US)	Mozilla
<input type="checkbox"/>		Mozilla Firefox (3.6.9)	58	3.6.9 (en-US)	Mozilla
<input type="checkbox"/>		Mozilla Firefox (3.0.3)	39	3.0.3 (en-US)	Mozilla
<input type="checkbox"/>		Mozilla Firefox (3.6.11)	32	3.6.11 (en-US)	Mozilla
<input type="checkbox"/>		Mozilla Firefox (3.6.4)	28	3.6.4 (en-US)	Mozilla
<input type="checkbox"/>		Mozilla Firefox (3.0.10)	24	3.0.10 (en-US)	Mozilla
<input type="checkbox"/>		Mozilla Firefox (3.6.16)	24	3.6.16 (en-US)	Mozilla
<input type="checkbox"/>		Mozilla Firefox (3.0.8)	20	3.0.8 (en-US)	Mozilla
<input type="checkbox"/>		Mozilla Firefox (3.5.5)	18	3.5.5 (en-US)	Mozilla
<input type="checkbox"/>		Mozilla Firefox (3.6.3)	18	3.6.3 (en-US)	Mozilla
<input type="checkbox"/>		Mozilla Firefox (3.5.3)	17	3.5.3 (en-US)	Mozilla
<input type="checkbox"/>		Mozilla Firefox 4.0.1 (x86 en-US)	15	4.0.1	Mozilla
<input type="checkbox"/>		Mozilla Firefox (3.5.7)	12	3.5.7 (en-US)	Mozilla
<input type="checkbox"/>		Mozilla Firefox (3.6)	12	3.6 (en-US)	Mozilla
<input type="checkbox"/>		Mozilla Firefox (3.6.15)	12	3.6.15 (en-US)	Mozilla
<input type="checkbox"/>		Mozilla Firefox (3.6.6)	11	3.6.6 (en-US)	Mozilla
<input type="checkbox"/>		Mozilla Firefox (3.0)	8	3.0 (en-US)	Mozilla
<input type="checkbox"/>		Mozilla Firefox (3.0.19)	7	3.0.19 (en-US)	Mozilla
<input type="checkbox"/>		Mozilla Firefox (3.6.10)	6	3.6.10 (en-US)	Mozilla
<input type="checkbox"/>		Mozilla Firefox (3.0.4)	5	3.0.4 (en-US)	Mozilla
<input type="checkbox"/>		Mozilla Firefox (3.0.11)	5	3.0.11 (en-US)	Mozilla
<input type="checkbox"/>		Mozilla Firefox (2.0.0.14)	4	2.0.0.14 (en-US)	Mozilla
<input type="checkbox"/>		Mozilla Firefox (3.0.6)	4	3.0.6 (en-US)	Mozilla
<input type="checkbox"/>		Mozilla Firefox (3.6.17)	4	3.6.17 (en-US)	Mozilla
<input type="checkbox"/>		Mozilla Firefox (3.0.7)	3	3.0.7 (en-US)	Mozilla
<input type="checkbox"/>		Mozilla Firefox (3.5.15)	3	3.5.15 (en-US)	Mozilla
<input type="checkbox"/>		Mozilla Firefox (2.0.0.6)	2	2.0.0.6 (en-US)	Mozilla
<input type="checkbox"/>		Mozilla Firefox (3.0.5)	2	3.0.5 (en-US)	Mozilla
<input type="checkbox"/>		Mozilla Firefox (3.5.1)	2	3.5.1 (en-US)	Mozilla

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KBOX1000 Adding Software



- While the option to create your own software inventory records exists, it should seldom be used! Failing to use the KBOX1000's automatically created software inventory records will result in software installation loops
- The KBOX1000 creates its own software inventory records from the WMI (Windows Management Instrumentation)
 - These records can not be edited
 - They are inherently smart, all software packages should be tied to this type of software inventory record

KBOX1000 Software Deployment

- Has AppDeploy Integration,
- Uses Windows Management Instrumentation to find what software is installed
- Best to use .msi installers for silent installs, produces best results
- Understands versions of programs, won't rollback to older versions



KBOX1000 Software Deployment

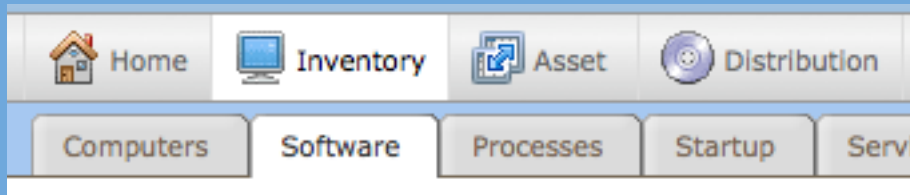
- Steps to Add Software

- Install the software on a machine that has the Kbox client
- Have the machine check in (for inventory update in the computer inventory section)
- Upload the installation file of the EXACT version thats on your computer.
- Feed in the silent install string.

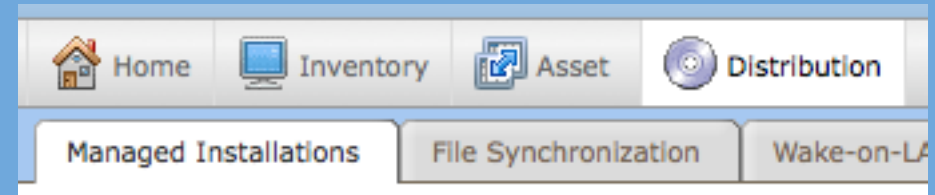
KBOX1000

Software Inventory vs. Software Deploy

- Found under "Inventory" -> "Software"
- Adding labels limits where this software can be deployed
- Software records are created by KACE here, you need to attach software to the record for it to show up in Distributions

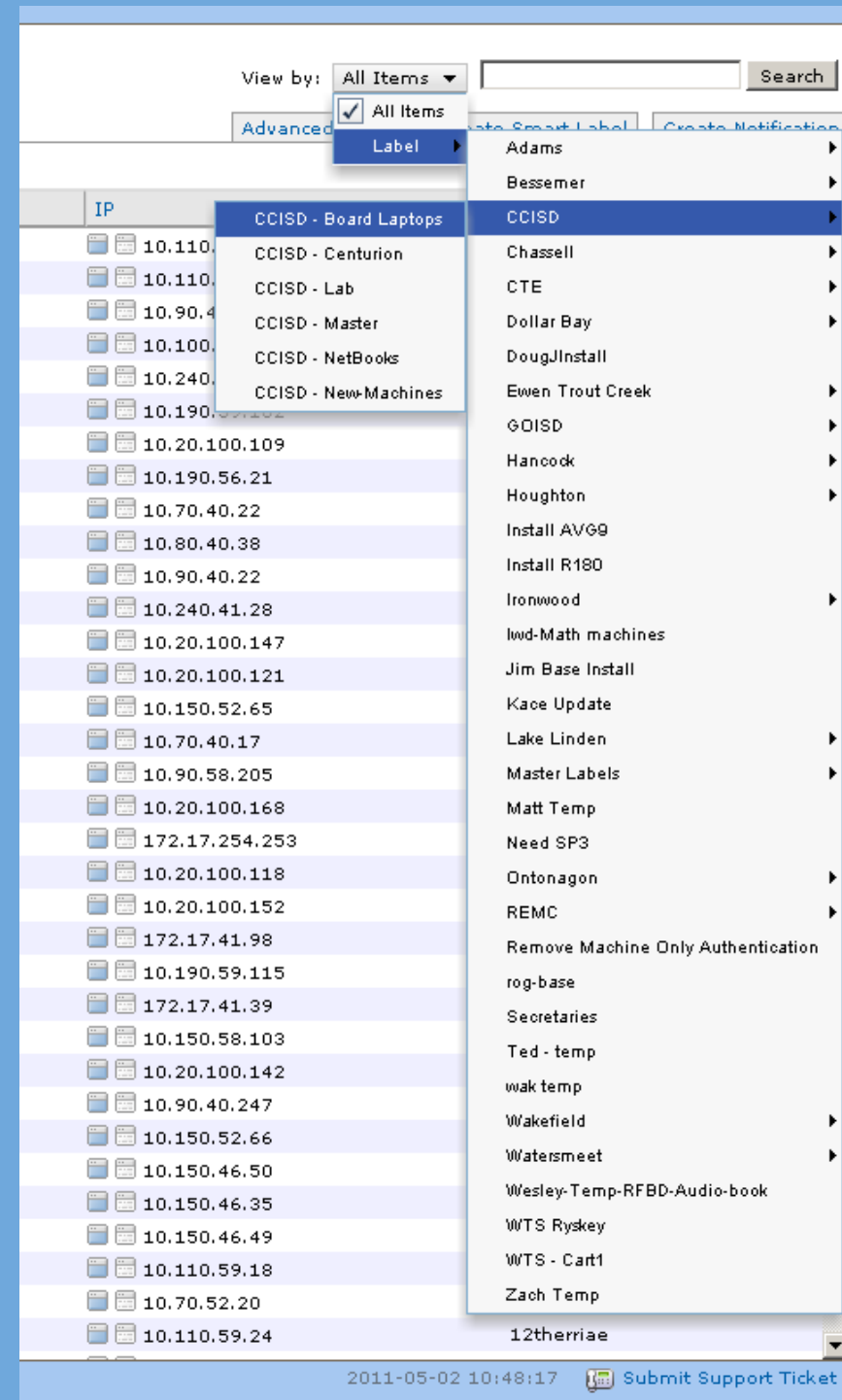


- Found under "Distribution" tab
- Adding labels deploys software to that label at the machines next check in
- Managed Installations can be added here once you attach software to the record in the inventory



KBOX1000 Labels

- Adds a layer of organization to your machine inventory
- Labels can be put inside of labels to add even more organization for bigger IT departments
- Machines, Software, Scripts, and Security Policies can be tied to labels for easy distribution



KBOX1000 Smart Labels

- Smart Labels allow for dynamic assignment of labels, which in turn dynamically assign software deployments
- Using smart labels, we can do a Zero to Deployed installation from the KBOX2000 -> KBOX1000 -> User Ready

Computers Software Processes Startup Service IP Scan MIA

Computer Inventory

View by: All Items Search

Advanced Search Create Smart Label Create Notification

Create Smart Label

To create a smart label, simply enter the search criteria and select the label:

[and/or]

Label Names

contains

CCISD - Master

AND

Software Titles

contains

AVG

Agent Version

contains
























Agent Version

contains

Choose label: CCISD - AVG Test Smart Label Create Smart Label Reset

Choose Action

 Showing 1-150 of 203 computers. [\[Next\]](#)

<input type="checkbox"/>	 Name [labels hidden]	Last Sync 	Description	IP	Last User
<input type="checkbox"/>	 CC1444	48s		  10.20.100.108	11hietalag
<input type="checkbox"/>	 CC1437	8m		  10.20.100.127	11griffite
<input type="checkbox"/>	 CC1446	8m		  10.20.100.117	11koskis
<input type="checkbox"/>	 CC1522	12m	LC Room 102 Student Computer	  172.17.50.22	cotem
<input type="checkbox"/>	 CC1465	16m		  172.17.40.29	scott
<input type="checkbox"/>	 CC1451	16m		  10.20.100.192	11sergeyee
<input type="checkbox"/>	 cc1454	16m		  10.20.100.131	12tikkanea

KBOX1000 Smart Labels

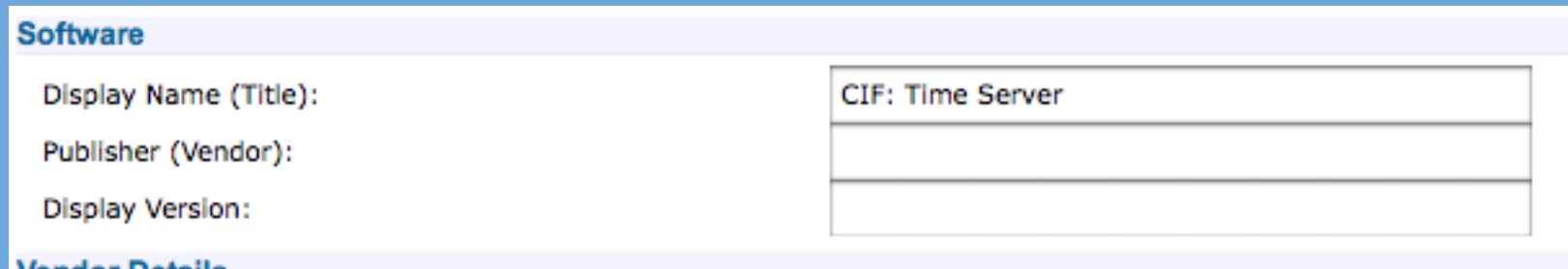
- You cannot manually add/remove items to a smart label. They are smart and linked to a filter
- When you create a smart label the machine has to check in before it goes into a smart label.
- You can create label groups. You then manually assign labels to a label group.
- You can have a smartlabel select criteria based on a machines existence in another smart label.

KBOX1000 Custom Inventory Fields

- Two uses:
 - When KACE does not create a software record for your piece of software, you can manually create one and tie a CIF to it
 - Can be used to report information from a machine to a new inventory field, this can then be used in your Smart Labels or Advanced Searches
- Syntax on Custom Inventory Fields can be found in the KBOX1000 Administrators Guide (Located in "Settings" -> "Support" -> "K1000 Series Documentation")

KBOX1000 Custom Inventory Fields

- A good example is the REMC1 NTP server ntp.remc1.net, we want this enabled on every machine, and we want to know which ones we still need to apply the script to
- Create a new software record with our CIF name

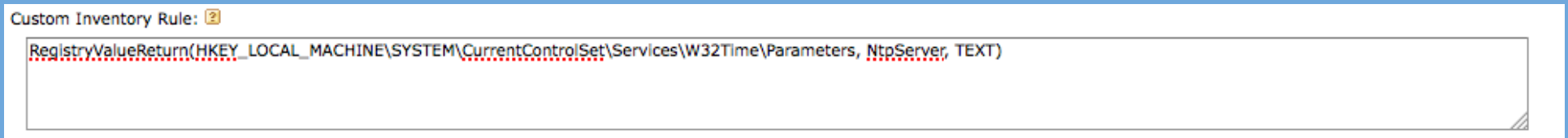


The screenshot shows a 'Software' record creation form. It has three input fields on the right side, each corresponding to a label on the left. The first field is labeled 'Display Name (Title):' and contains the text 'CIF: Time Server'. The second field is labeled 'Publisher (Vendor):' and is empty. The third field is labeled 'Display Version:' and is empty. Below the form, the text 'Vendor Details' is partially visible.

Software	
Display Name (Title):	CIF: Time Server
Publisher (Vendor):	
Display Version:	

Vendor Details

- Add our Custom Inventory Rule per the Admin Guide Syntax



The screenshot shows a 'Custom Inventory Rule' configuration window. It has a title bar that says 'Custom Inventory Rule: [?]'. Below the title bar is a large text area containing the following syntax: `RegistryValueReturn(HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\W32Time\Parameters, NtpServer, TEXT)`. The text area has a red dotted border and a small diagonal icon in the bottom right corner.

Custom Inventory Rule: [?]

```
RegistryValueReturn(HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\W32Time\Parameters, NtpServer, TEXT)
```


KBOX1000 Custom Inventory Fields

- The next time a machine checks in, it will check the registry entry we specified in our rule, and report it under the machines inventory

Inventory Information	
Hardware	
Printers (2)	
Network Interfaces (1)	
K1000 Agent	
User	
Operating System	
Notes	
Software	
Installed Programs (82)	
Custom Inventory Fields (3)	
1) CIF: Time Server:	ntp1.remcl.net [string]
2) CIF: WSUS Key Report TargetGroup:	WSUS_CCISD [string]
3) CIF: WSUS Key Report WUServer:	http://wsus.remcl.net [string]
Uploaded Files (0)	
Installed Patches via Inventory (182)	

KBOX1000 Process Metering

- Allows you to keep track of which machines run a process and how long its running for.
- Inventory->Processes (enable metering here)
- Asset->Metering (for tracking your metered processes)

KBOX1000 Windows Update Feed

- Windows updates
- OSX updates
- The K1000 utilizes Lumension for patch management.
Patches are tested prior to being issued to your K1000

KBOX1000 and 2000: Site Replication Feature



- Allows for load balancing between your sites
- Reduces network traffic over slow backbone links
- Does NOT provide failover from your main units
- KBOX1000 requires a Windows Server Machine/VM
- KBOX2000 requires a use of a VM image



Questions Or Comments?

